IN THE CLAIMS:

1. (Previously Presented) A method of establishing a data transfer rate between a moving storage medium and a read/write device, said method comprising the steps of:

reading successive reference regions on the moving storage medium to derive a timing signal having a frequency that varies directly with variations in the speed of the moving storage medium;

processing the timing signal to provide a clock signal having a frequency that is a function of the timing signal frequency, and thereby represents the speed of the storage medium; and

using the clock signal to determine the rate for writing data to the moving storage medium, so that said rate is proportional to the speed of the moving storage medium.

2. (Previously Presented) The method of claim 1, wherein the moving storage medium moves in a first direction, and each of said reference regions extends in a second direction that is perpendicular to said first direction, and respective reference regions are interleaved with timing-based servo regions that extend along diagonals with respect to said first and second directions.

3. (Original) The method of claim 1, further comprising:

locking a variable frequency oscillator to the timing signal to generate a data transfer rate.

4. (Original) The method of claim 3, wherein locking the variable-frequency oscillator includes bringing a phase-locked loop into lock.

5. (Original) The method of claim 3, wherein the variable-frequency oscillator is a voltage-controlled oscillator.

6. (Original) The method of claim 1, further comprising:

reading data from the moving storage medium at a rate proportional to the speed of the moving storage medium.

7. (Original) The method of claim 1, wherein the moving storage medium is a tape.

8. (Original) The method of claim 7, wherein the tape is magnetic tape.

9. (Original) The method of claim 1, wherein the moving storage medium is a disk.

10. (Original) The method of claim 9, wherein the disk is one of a magnetic disk and an optical disk.

11. (Original) The method of claim 1, wherein the reference regions reside on at least one track from a plurality of tracks located on the moving storage medium.

12. (Previously Presented) The method of claim 2, wherein the reference regions are respectively interleaved with timing-based servo regions located on the moving storage medium, and wherein said reference regions are adapted to provide information representing only the speed of said storage medium along said first direction, and said timing-based servo regions are adapted to provide information representing the position of said storage medium along said second direction.

13. (Currently Amended) An apparatus, comprising:

a first read head disposed to read reference regions from a moving storage medium~~, which is moving relative to the first read head,~~ in order to generate a timing signal, wherein the speed of the moving storage medium is variable, and said timing signal is generated to have a frequency that varies directly with variations in the speed of the moving storage medium;

a phase detector having a first input, a second input and an output, the timing signal being coupled to the first input of the phase detector; and

a voltage-controlled oscillator having a control input and an output, the output of the phase detector being fed into the control input of the voltage-controlled oscillator, and the output of the voltage-controlled oscillator being coupled to the second input of the phase detector, to form a phase locked loop wherein the voltage-controlled oscillator is locked to the timing signal to generate a signal representing a data transfer rate.

14. (Original) The apparatus of claim 13, further comprising:

a filter,

wherein the output of the phase detector is coupled to the control input of the voltage-controlled oscillator through the filter.

15. (Original) The apparatus of claim 14, wherein the filter includes a digital filter.

16. (Original) The apparatus of claim 14, wherein the filter includes an analog filter.

17. (Original) The apparatus of claim 13, further comprising:

a memory buffer; and

a write head,

wherein the write head writes data from the memory buffer to the moving storage medium at a rate proportional to the data transfer rate.

18. (Original) The apparatus of claim 13, further comprising:

a memory buffer; and

a second read head,

wherein the second read head reads data from the moving storage medium into the memory at a rate proportional to the data transfer rate.

19. (Original) The apparatus of claim 13, wherein the reference regions are located on at least one track of the moving storage medium.

20. (Original) The apparatus of claim 13, wherein the reference regions extend in an extension direction that is different from a direction of motion of the moving storage medium.

21. (Original) The apparatus of claim 20, wherein the extension direction is perpendicular to the direction of motion of the moving storage medium.

22. (Original) The apparatus of claim 13, wherein the reference regions are interleaved with a timing-based servo pattern located on the moving storage medium.

23. (Previously Presented) A storage medium product comprising:

a recording surface having at least one servo track, wherein the servo track includes a plurality of timing-based servo regions interleaved with a plurality of reference regions, said reference regions being adapted to provide information representing only the speed of the recording surface along a first direction, and timing-based servo regions that are adapted to provide information representing the position of said recoding surface along a second direction perpendicular to said first direction.

24. (Original) The storage medium product of claim 23, wherein the recording surface has a direction of motion.

25. (Original) The storage medium product of claim 24, wherein the direction of motion is circular.

26. (Original) The storage medium product of claim 24, wherein the direction of motion is linear.

27. (Original) The storage medium product of claim 24, wherein the reference regions extend in an extension direction that is different than the direction of motion.

28. (Original) The storage medium product of claim 27, wherein the extension direction is perpendicular to the direction of motion.

29. (Original) The storage medium product of claim 23, wherein the reference regions are recorded at a first frequency and the servo bands are recorded at a second frequency that is distinct from the first frequency.